Foundations of Patterns, Reasoning and Algebra
Math 250, Fall 2012
Instructor: Christine von Renesse

Course Description:
An activity-based format based on the Standards for Mathematical Practice will be used to create a learning environment that fosters an exploration of the processes of doing, learning, discussing, and teaching mathematics.
Topics will include: finding, analyzing, and describing patterns; inductive and deductive reasoning; advanced problem solving and logic; sets and classification; linear, quadratic and exponential functions; common factors, common multiples and prime numbers.
The goal is for the students to develop deep conceptual understanding of the course material in a learning environment that models the pedagogical foundations of the Common Core Frameworks for Mathematics and the National Council of Teachers of Mathematics standards.

Class Meetings
This online class will meet Tuesdays 8-9 pm online. You need a webcam, a headset and a microphone (often inbuilt) to participate in the online meeting. The other parts of the course are asynchronous and you can complete your assignments and group meetings on your own schedule.

School Connection
Each of you will have a pen pal at an elementary school. This connection will allow us to see how children think and reason about algebra.

Textbook
We will use the methods book "Elementary and Middle School Mathematics, Teaching Developmentally" by John A. Van De Walle, either the WSU custom edition or the regular edition 7.